

Commodification and Cultural Resilience in Biologically High-Risk Culinary Tourism: A Case of Lawar Plek in Bali

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ABSTRACT

This study aims to analyze the resilience strategies of *Lawar Plek*, a traditional Balinese dish utilizing raw blood, and to explain how its risk-culture paradox is managed within the culinary tourism industry amidst conflicting medical health narratives and the market demand for cultural authenticity. Employing a qualitative case study design, research was conducted in major culinary centers across Gianyar and Badung Regencies. Data were gathered through participant observation, document analysis, and in-depth interviews with purposively selected key informants representing traditional vendors, local consumers, and external stakeholders. Rather than conducting laboratory biomedical testing, this study evaluates the negotiation between community perceptions of cultural authenticity and global biomedical health standards, analyzing how the latter is internalized or resisted by cultural actors. The analysis, guided by commodification and cultural resilience theories, reveals that the resilience of *Lawar Plek* is driven by a "myth of strength" and masculine identity tied to raw blood consumption. Furthermore, the dish is commodified by blending modernized presentation with its "extreme" culinary nature, appealing to tourists seeking exotic experiences. Ultimately, *Lawar Plek* serves as a form of cultural resistance against global health standardization. This research contributes to the literature on culinary tourism by providing a framework for how biologically high-risk traditional foods transform perceived risks into unique selling propositions.

Keywords: Balinese Culinary Tourism, Commodification, *Lawar Plek*, Medical Risk, Resilience.

INTRODUCTION

Bali serves as a cultural space where traditions are continuously produced and consumed through dynamic

culinary elements like *Lawar Plek*. As a variant utilizing fresh raw pork blood (*getih*) as the primary flavor and texture binder, this dish symbolizes togetherness within the *ngelawar* tradition, as well as masculinity and strength.

While *Lawar Plek* continues to attract domestic and international tourists amid the pressures of globalization and modern food preferences (Sukadana et al., 2022), its reliance on raw ingredients poses inherent risks of pathogenic bacterial contamination. Existing literature notes that the addition of traditional *base genep* spices possesses antibacterial properties capable of reducing *Escherichia coli*, particularly at a 70:30 meat-and-blood-to-spice ratio (Suastina et al., 2023). Furthermore, although studies indicate that detected *E. coli* strains lack the harmful enterotoxigenic (ETEC) gene (Hardiyanta et al., 2024), microbial testing at stalls consistently reveals total bacterial counts exceeding national safety standards (Yanti, 2018).

For tourism scholarship, these microbiological findings transcend basic food safety; they represent a risk-perception paradox. Framed through Consumer Behavior Theory and Structural Risk-Handling Frameworks, the consumption of *Lawar Plek* creates a tension between the pursuit of authentic experiences and the perception of health risks. The ambiguity surrounding sanitation standards in traditional food stalls creates a structural vulnerability that threatens the sustainability of gastronomic tourism products. Therefore, this study is essential to examine how cultural actors navigate these risks through informal practices and social capital, ultimately balancing the imperatives of cultural

preservation with increasingly stringent modern food safety standards (Sari, 2018).

Currently, *Lawar Plek* faces substantial medical challenges due to zoonotic risks, particularly *Streptococcus suis* transmission, which can cause meningitis or death (Tarini et al., 2022). Concurrently, global tourism demands hygiene standardization under the CHSE framework. Paradoxically, instead of being abandoned, *Lawar Plek* has been commodified from a ceremonial domestic menu into a commercial commodity sold in modern stalls, sought by tourists valorizing “authenticity.” This generates a paradox: how can a medically “dangerous” product show extraordinary resilience and become an attraction within exotic culinary tourism? Based on this health risk and tradition preservation paradox, this study formulates three principal research concerns. First, it examines raw pork blood's philosophical position as a strong symbol of Balinese cultural identity, where philosophical narratives dominate public discourse despite public health risks like *Streptococcus suis*, *Taenia solium*, and *Taenia saginata*. Second, it analyzes digital and tourism-driven commodification processes transforming *Lawar Plek* from a ritual artifact into an “extreme experience” product, converting raw blood aesthetics into digital content capital. Third, it investigates culinary entrepreneurs' resilience strategies, including “surface-level hygiene” measures and glove usage, to maintain traditional authenticity amid global safety standardization without eliminating its cultural essence.

Previous research generally isolated gastronomic aspects or bacterial hazards. A gap thus exists where socio-cultural and medical dimensions are rarely integrated regarding risky culinary commodification. Studies on Sate Lilit demonstrate that traditional foods can be commercialized without diminishing original cultural value (Rahmawati et al., 2019). Similarly, *babi guling* evolved from Hindu religious offerings into a popular culinary commodity, illustrating the close relationship between cultural sacrality and commodification (Sulistiyawati, 2023). Conversely, despite the advantage of fresh ingredients, local culinary entrepreneurship faces challenges from globalization and younger generations favoring imported foods (Sukadana et al., 2022). The novelty of this study lies in its interdisciplinary analysis bridging medical (risk) and cultural (resilience) narratives. It treats *Lawar Plek* as a “cultural subject” negotiating with modernity. The conceptual focus on the “Risk–Authenticity Paradox” offers a theoretical contribution to culinary tourism,

suggesting perceived danger itself becomes part of the commodified value of authenticity.

METHODOLOGY

This study employs a qualitative case study approach, enriched with descriptive strategic analysis tools, to explore the tension between biological health risks and the preservation of cultural identity in the culinary practice of *Lawar Plek*. A case study design is deliberately selected because it allows for an in-depth, multi-faceted investigation of a complex contemporary phenomenon within its real-world context specifically, how a traditional culinary practice navigates modern health standards and commercialization. The research sites were purposively selected in the regions of Gianyar and Badung, identified as epicenters of traditional Balinese cuisine currently undergoing commercial transformation.

To construct a comprehensive case and ensure data depth, participants were chosen through purposive sampling, focusing on key informants within each target category. These participants consisted of: traditional vendors and culinary practitioners who were interviewed directly at their food stalls (60–75 minutes); local consumers and customary leaders who comprehend the philosophical meaning of blood as a symbol of life, participating in in-depth interviews (60–90 minutes); and external stakeholders comprising culinary tourists, food vloggers, and public health academics to validate zoonotic risk issues. Furthermore, to build consensus on strategic adaptations, Focus Group Discussions (FGD) were conducted involving representatives from all stakeholder groups. These primary data were supported by secondary data consisting of CHSE regulations, medical literature concerning *Streptococcus suis* infection, and local food sanitation guidelines.

Within this case study framework, a multi-method data collection strategy was justified and applied to capture the physical realities of the phenomenon. This involved participant observation to examine “surface-level hygiene” practices and the *ngelawar* preparation process directly at the culinary sites. These observations were supplemented by document analysis of local health regulations. To ensure the validity and reliability of the findings, source and methodological triangulation techniques were rigorously applied. Field observations of vendors' sanitation practices were explicitly contrasted with consumer narratives and CHSE guidelines to reveal how health standards are negotiated within commercial realities.

Data analysis was initially conducted systematically following the interactive model of Miles, Huberman, and Saldaña, supported by NVivo software for coding major thematic categories. To bridge the qualitative findings with actionable resilience strategies, the thematic data were subsequently operationalized into a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis. Internal and External Factor Analysis Summary (IFAS and EFAS) matrices were constructed to evaluate the magnitude of each factor. The weights and ratings for these matrices were determined quantitatively based on consensus achieved during the stakeholder FGDs. This strategic formulation organically structured the data into a "Risk-Negotiation Matrix" (comprising WO, WT, ST, and SO strategies), culminating in a model of "negotiated authenticity." This model serves as a policy recommendation that harmonizes global health standards with the protection of Balinese gastronomic heritage.

RESULT AND DISCUSSION

1. Thematic Mapping: The Dominance of Identity and Philosophical Narratives in the Discourse of Lawar Plek

Based on qualitative data frequency analysis presented in the Tree Map (Figure 1), narratives related to Identity and Philosophy constitute the most dominant aspect within the discourse of *Lawar Plek*, accounting for approximately 60% of the total coded mapping area. Terms such as "Authenticity," "Tradition," and expressions of taste appreciation (e.g., *nyamlyuh*, referring to intense savoriness) appear significantly more frequently than Medical Safety aspects, which occupy only 15% of the coded proportion.

This pattern indicates a strong tendency in which cultural preferences carry greater cognitive weight for the community compared to awareness of biological risk. The limited discussion concerning bacteria or health hazards suggests that medical threats do not represent a primary concern for either consumers or culinary practitioners when compared with narratives emphasizing ancestral heritage preservation.



Figure 1. Thematic Mapping: Dominance of Identity Narratives in *Lawar Plek* Discourse (Primary Data: 2026)

The mapping of inter-variable relationships illustrated in the Flow Diagram (Figure 2) reveals a cognitive strategy employed by the community to neutralize medical anxiety through local wisdom. A strong correlation is identified between the use of *base genep* (traditional spice mixture) and risk perception; community members tend to employ the narrative of "spices as medicine" to counter concerns regarding *Streptococcus suis* contamination. Furthermore, raw blood has undergone a semantic shift from being merely a food ingredient to becoming a symbol of vitality and a form of visual capital for digital aesthetic content. Amid the tension between tradition and modern food safety standards, a strategy of "surface-level hygiene" emerges as an economic resilience mediator. This approach serves as a compromise point that allows traditional food stalls to maintain authenticity values while simultaneously meeting perceived standards of acceptability for tourists.



Figure 2. Flow Diagram of Coding Relationship Mapping Among Variables (Primary Data: 2026)

Based on the Comparison Matrix (Table 1), the data reveal a pronounced perception gap between medical authorities and local community groups. Informants from medical

backgrounds consistently associate the use of raw blood with high health risks. In contrast, culinary practitioners and customary leaders almost exclusively interpret raw blood as a symbol of vitality and express confidence in the natural inhibitory properties of traditional spices. Interestingly, for tourists and content creators, the element of risk is transformed into a distinctive tourism attraction.

heritage, which, according to culinary and tourism cultural studies, constitutes a fundamental basis for sustaining tradition amid modernity (Verma et al., 2025; Zoidze, 2025).



Figure 3. Close-up image of hands mixing raw blood with traditional spices (*base genep*) (Primary Data: 2026)

Table 1. Matrix Coding Query – Perception Gap Comparison Across Informant Groups

	Medical Experts & Academics	Culinary Practitioners	Traditional Leaders	Tourists & Content Creators
Raw Blood → <i>S. suis</i> Risk	Deep Red	Orange	Light Gray	Light Gray
Raw Blood → Symbol of Vitality	Orange	Deep Red	Deep Red	Light Gray
Base Genep → Natural Disinfectant	Light Gray	Orange	Orange	Light Gray
Raw Blood → Tourism Appeal	Light Gray	Light Gray	Light Gray	Deep Red
Surface Hygiene (Resilience)	Light Gray	Light Gray	Light Gray	Orange

Source: Primary Data, 2026

The findings demonstrate that the existing gap is not primarily caused by a lack of health information, but rather by a conflict of meaning between medical science and cultural identity. For tourists and digital content producers, the perceived risk is even commodified as a central appeal within the experience of extreme culinary tourism.

2. The Risk–Authenticity Paradox: Identity Above Safety

Philosophically, *Lawar Plek* occupies a central position within the structure of traditional Balinese cuisine as a representation of courage and togetherness. In-depth interviews with customary leaders reveal that the use of fresh blood is not merely a matter of taste preference, but rather a symbol of life that connects humans with nature and the Creator. Within the *ngelawar* tradition, blood is perceived as a “hot” element that generates energy. Consequently, removing raw blood from the composition of *Lawar Plek* is considered not only to diminish its flavor but also to sever the essential values embedded within ancestral heritage.

These findings are consistent with theoretical arguments advanced by Zoidze (2025) and Verma et al. (2025) regarding the importance of traditional elements in culinary and ritual heritage, in which the integrity of authentic raw materials is regarded as a vital instrument in maintaining sociocultural identity. From this perspective, the persistence of raw blood usage in *Lawar Plek* can be interpreted as an effort to safeguard the sacrality of cultural

From a medical standpoint, the presence of *Streptococcus suis* bacteria in raw pork blood represents a tangible threat that has been documented in multiple meningitis cases in Bali. Medical practitioners participating as informants in this study emphasized that infection risk is latent; bacteria may be transmitted to humans through open wounds during processing or through direct consumption. Clinically, traditional spices do not possess sufficient bactericidal capacity against this pathogen unless accompanied by high-temperature cooking processes. This condition creates a substantial gap between global medical food safety standards and local perceptions of “culinary pleasure.” These findings are corroborated by various studies confirming the close association between raw pork blood consumption and outbreaks of *S. suis* infection in Bali and South Korea, leading to severe clinical symptoms such as meningitis and sepsis (Choi et al., 2024; Tarini et al., 2022; Saputra et al., 2023). The risk of infection increases significantly when bacterial exposure occurs through open wounds during food preparation (Rayanakorn et al., 2018). Although the prevalence of bacteria in pork blood in markets may be relatively low, the annual risk of infection associated with raw blood consumption in certain locations remains significant and requires strict food safety monitoring (Khantasup et al., 2022). Therefore, the consumption of pork blood without adequate processing generates a considerable divide between medical food safety standards and local standards of “taste satisfaction,” while simultaneously constituting a primary concern in zoonotic disease prevention (Kerdsin et al., 2022; Rayanakorn et al., 2018).

Interestingly, local communities have developed their own belief systems to bridge medical anxieties. A collective narrative suggests that traditionally raised pigs, often referred to as village pigs, possess greater natural resistance to disease compared to industrially farmed pigs. Furthermore, components of *base genep*, such as aromatic ginger (*kencur*), ginger, and chili, are positioned not only as flavoring agents but also as medicinal substances and natural disinfectants.

This paradox demonstrates that within Balinese society, the validity of tradition is often perceived as more credible than health authority warnings when such warnings are viewed as threatening the continuity of cultural practice.

Medical anthropological analysis concludes that this behavior represents a prioritization of cultural identity over biological risk. Community members tend to preserve the authenticity of *Lawar Plek* because the dish functions as a crucial medium of social cohesion during customary ceremonies. In this context, the fear of losing cultural identity or the “original taste” outweighs anxiety regarding potential bacterial infection.

The continued consumption of raw blood indicates that public health concepts cannot be approached solely from a biomedical perspective but must incorporate deeply embedded sociocultural dimensions. Therefore, culturally sensitive health education strategies that acknowledge local values and belief systems are essential to bridge the gap between medical science and traditional Balinese practices (Hartanti & Budipramana, 2020; Widyawati et al., 2025). Bali possesses a highly structured social and cultural system. Religious rituals frequently involve livestock, particularly pigs, which are offered in customary ceremonies such as *odalan*, *ngaben*, and *metatah*. After the ritual, portions of the sacrificial meat are processed and consumed collectively. In this context, the practice of preparing pork in the form of *lawar* or *komoh* constitutes a potential transmission risk factor.

Traditional *lawar* is often prepared from raw meat mixed with fresh pork blood, thereby enabling the transmission of *Taenia solium* larvae if the pig is infected. A field study conducted in Gianyar Regency found that approximately 35% of respondents were unaware of the transmission pathways of tapeworm infection, and 20% believed that ritual pork offerings could not carry disease because they had been “purified” through mantras and ceremonial *banten* offerings. This finding indicates that medically based control efforts remain insufficient without consideration of cultural context and local belief systems.

Public health education in Bali must therefore be designed through approaches that respect deeply rooted religious values and customary traditions.

Clinically, infection by *Taenia saginata* and *Taenia solium* produces similar symptoms, although *T. solium* presents greater risk due to its potential to cause cysticercosis if eggs are ingested by humans (autoinfection). The primary symptoms of taeniasis include abdominal pain or epigastric discomfort, appetite disturbances sometimes accompanied by nausea, mild weight loss, and the passage of worm segments (proglottids) through the anus. In cases of cysticercosis, larvae may migrate to muscle tissue, the eyes, or the central nervous system. The most severe manifestation is neurocysticercosis, which may cause epilepsy, chronic headaches, and other neurological disorders.

In response to these clinical risks, within public health discourse, the consumption of raw pork meat and blood is inherently linked to high risks of zoonotic transmission, such as *Streptococcus suis* and *Taenia solium* infections. Although medical authorities rigorously document these biological hazards, field findings indicate that such clinical narratives and threats have highly limited resonance among *Lawar Plek* practitioners and consumers. Rather than viewing pathogenic threats as absolute health crises necessitating biomedical intervention, the local community negotiates these risks through a cultural lens. The fear of infection is neutralized by a communal belief in the natural antibacterial properties of *base genep* spices, alongside the pride in masculine identity inherent in the *ngelawar* tradition. This finding highlights a sharp polarization: on one side lies rigid biomedical food safety standards, while on the other lies the cultural rationality of the community, which effectively transforms biological risk into a hallmark of traditional authenticity.

The primary pharmacological treatment for *taeniasis* is praziquantel (10 mg/kg body weight, single dose) or niclosamide (2 g single dose). However, treatment without environmental control is often ineffective due to high reinfection risk. Preventive measures include thorough cooking of meat at temperatures exceeding 70°C, improved environmental sanitation, particularly in human fecal management, veterinary inspection of pork and beef prior to consumption, and public health education targeting livestock-raising communities and traditional households. Despite these recommended pharmacological protocols and preventive standards, health authorities frequently encounter obstacles in practical implementation. Public

health academics interviewed for this study emphasize that risks such as *taeniasis* remain persistent threats that necessitate a cross-sectoral One Health approach. Yet, these systematic medical concerns are often overshadowed by the perspectives of culinary practitioners. Instead of adopting modern sterilization protocols, research informants prioritize the "authenticity of flavor," which they believe is already protected by the composition of traditional spices. This suggests that for culinary entrepreneurs, risk management is not defined by compliance with medical protocols, but by validating food safety through narratives of local wisdom passed down through generations.

3. Commodification Transformation: From Ritual Table to Digital Showcase

The transformation of *Lawar Plek* from a domestic-ritual space into a public-commercial sphere reflects strong commodification dynamics. Historically, *Lawar Plek* was encountered only during major ceremonies (*panca yadnya*) and prepared collectively in household kitchens or temple compounds. Today, however, it has become a market commodity available daily in culinary stalls. This shift alters its meaning from a sacred offering to an economic product evaluated based on price, availability, and popularity among broader consumers.



Figure 4. Traditional presentation on banana leaves (domestic/ritual context)
(PPrimary Data: 2026)

Analysis of social media and culinary tourism promotion indicates that *Lawar Plek* is now positioned as an "extreme experience" for travelers. The visual appeal of its contrasting red blood coloration becomes aesthetic capital in digital content on platforms such as Instagram and TikTok. Tourists seek *Lawar Plek* not merely for nourishment but to obtain narrative proof that they have experienced the most authentic dimension of Bali. In this context, authenticity is commodified into a saleable value

convertible into financial gain for culinary entrepreneurs. This phenomenon aligns with findings by Babalou et al. (2025) and Darson et al. (2025), which indicate that social media significantly shapes tourist perceptions, with influencers acting as catalysts in reconstructing destination images through entertainment-oriented content, although their influence on broader health risk awareness remains limited. Visual commodification through Instagram Reels and food vlogger content has proven particularly effective in generating audience engagement, especially among Gen Z audiences responsive to authenticity narratives (Aviantineke et al., 2025; García-Carrión et al., 2023). Narrative experiential power becomes a strong predictor of tourist satisfaction and loyalty, as social media engagement and brand awareness collectively reinforce the appeal of exotic culinary tourism (Simangunsong et al., 2025). Thus, *Lawar Plek* is no longer viewed solely as a traditional dish but as a digital visual asset that reinforces Bali's position within the global experiential culinary tourism map.



Figure 5. Presentation in a modern stall with aesthetic plating, garnish, and lighting designed for social media (commodification context)
(PPrimary Data: 2026)

Interviews with tour guides further reveal market segmentation in the sale of *Lawar Plek*. Some stalls maintain a traditional atmosphere to target the "local-authentic" market, while others adopt modern restaurant presentation standards to attract higher-end tourists. This transformation dynamic is systematically illustrated in the Commodification and Value Transformation Flow of *Lawar Plek* (Table 2), mapping the evolution of its function and meaning from private domain to global commercial stage.

Table 2. Commodification Flow and Value Transformation of *Lawar Plek*

Stage	Scope	Primary Function	Meaning of Raw Blood	Distribution Mechanism
1. Customary Ritual	Domestic & Temple (Private)	Ceremonial medium (Yadnya) & symbol of togetherness	Sacred Symbol: Representation of life and cosmic balance	<i>Ngejot</i> : Non-monetary sharing (social/barter)
2. Public Consumption (Food Stall)	Local Community (Limited Public)	Fulfillment of primordial taste & livelihood source	Taste Identity: Indicator of culinary quality (nyamluh) and cook expertise	Economic Transaction: Sold in local stalls at affordable prices
3. Culinary Tourism & Digital Content	Tourism & Social Media (Global)	Entertainment, social status & extreme experience	Visual Commodity: "Dare-test" object and unique/exotic aesthetic content	Mass Commercialization: Marketed as a "Hidden Gem" with branding value

Source: Primary Data, 2026

Based on Table 2, a clear transition in the meaning of raw blood is evident. In the Ritual Stage, blood functions as a sacred symbol representing cosmic balance and is distributed socially through *ngejot*. In the Public Consumption Stage, its function shifts toward taste identity and a culinary quality marker (*nyamluh*). The most radical transformation occurs in the Culinary Tourism & Digital Content Stage, where raw blood is no longer valued primarily for sacrality or taste but is commodified as visual capital and a "dare-test" object for tourists.

This phenomenon clearly indicates desacralization, as ritual elements in *lawar* preparation are often neglected for mass production efficiency. This hyper-commercialization triggers deep concern and moral pushback among customary leaders (*Bendesa Adat*), who view this shift as a form of spiritual degradation. Raw blood, which is fundamentally a sacred medium to balance the cosmic realms (*Yadnya*), is now reduced to a mere exotic spectacle on social media. This aggressive commercial drive is seen as stripping the tradition of its sacred gravity. As one customary leader lamented:

"The blood in lawar is not a toy; it is a symbol of life and a sacred offering to balance the cosmos in Yadnya. When it is dragged into the digital realm and turned into a 'dare-

test' content or an extreme spectacle to entertain tourists, it is deeply painful. Its sanctity collapses, replaced by a commercial circus that completely loses respect for the ancestors." (Ketut, 59 years old, Customary Leader).

Despite this cultural resistance against the desecration of its meaning, the raw blood element is preserved because it constitutes the primary "brand" sought by consumers in the culinary tourism market.

The impact of commodification includes taste standardization that may differ from rural, original versions. To accommodate broader preferences, some vendors adjust spice levels and seasoning ratios while maintaining raw blood as the authenticity marker. This demonstrates that within tourism industries, the "authentic label" often holds greater importance than the original process itself. *Lawar Plek* thus becomes positioned between efforts of tradition preservation and demands for sustained commercial appeal within a digital economic ecosystem driven by unique content consumption.

This phenomenon confirms theoretical propositions that authenticity commodification shifts focus from geographical and traditional originality toward socially constructed meanings shaped by consumer expectations and digital narratives (Koufodontis & Gaki, 2025). Such processes create taste standards tailored to broader markets, potentially obscuring traditional authenticity and leading to culinary homogenization (Moyer-Nocchi, 2020; Nair et al., 2020).

However, commodification may also strengthen regional gastronomic identity through marketing strategies highlighting cultural elements, although unethical business practices remain a threat to authenticity (Cheng et al., 2024). Perceptions of authenticity in culinary tourism are increasingly shaped by digital narratives and collective experience rather than solely historical accuracy, rendering authenticity a negotiated and consumed product within modern tourism contexts (Hughes, 1995; Lunchaprasith, 2016). Accordingly, the use of raw blood in *Lawar Plek* functions as an "authenticity anchor" amid other taste modifications, while simultaneously presenting significant challenges in preserving original tradition under global commercial pressures (Gupta & Sharma, 2023; Lloyd-Parkes & Filipponi, 2025).

4. IFAS, EFAS, and SWOT Matrix Analysis in the Resilience of *Lawar Plek*

4.1 Internal (IFAS) and External (EFAS) Environmental Analysis

Based on the findings presented in the previous subsection,

Lawar Plek demonstrates a distinctive strategic profile. Internally (IFAS), its primary strength lies in its “authenticity anchor” and the philosophical value of blood as a symbol of life. However, critical weaknesses emerge from the biological risk associated with *Streptococcus suis* and the potential for cross-contamination within traditional processing practices.

From an internal perspective, *Lawar Plek*’s strengths are rooted in its philosophical and sensory values. As detailed in Table 3, the primary strength lies in the status of raw blood as a symbol of vitality, which produces a distinctive texture and taste (*nyamluh*). Furthermore, community trust in *Base Genep* as a natural disinfectant constitutes social capital that reinforces the endurance of this culinary tradition.

Table 3. Internal Factor Analysis Summary (IFAS)

Internal Strategic Factors	Category	Weight	Rating	Score	Explanation Based on Qualitative Data
1. Philosophy & Essential Values	Strength	0.15	4	0.60	Strong cultural roots as a symbol of courage and life within the <i>ngelawar</i> tradition.
2. Sensory Distinctiveness (<i>Nyamluh</i>)	Strength	0.20	4	0.80	The use of raw blood creates a unique texture and flavor that cannot be substituted.
3. Product Authenticity	Strength	0.15	4	0.60	Raw blood functions as an immutable “authenticity anchor” in the culinary tourism market.
4. Local Wisdom (<i>Base Genep</i>)	Strength	0.10	3	0.30	Community trust in traditional spices as natural disinfectants (social capital).
1. Food Safety Risk	Weakness	0.15	1	0.15	High vulnerability to <i>S. suis</i> bacteria due to the absolute absence of a heating process.
2. Limitations of Medical Standards	Weakness	0.10	2	0.20	Traditional spices are clinically insufficient to eliminate pathogens

3. Processing Hygiene	Weakness	0.10	1	0.10	without heat. Direct hand contact (<i>personal touch</i>) constitutes a source of cross-contamination from a medical perspective.
4. Desacralization of the Process	Weakness	0.05	2	0.10	Mass-production efficiency in modern food stalls risks diminishing original ritual values.
TOTAL IFAS		1.00		2.85	

Source: Primary Data, 2026

However, these strengths intersect with significant vulnerabilities in food safety. The IFAS analysis indicates that the absence of a heating process renders the product highly susceptible to *Streptococcus suis*. Clinically, traditional spices lack sufficient bactericidal capacity to eliminate pathogenic microorganisms without high temperatures. This condition is further exacerbated by the desacralization of the production process in modern food stalls, where efficiency often overrides hygienic considerations.

Externally, *Lawar Plek* operates within a dynamic tourism landscape. As summarized in Table 4, substantial opportunities emerge through digitalization. The aesthetic capital of vividly contrasting red blood attracts food vloggers and younger generations seeking visually striking, “aesthetic yet extreme” content. The transformation of *Lawar Plek* from a ritual dish into a modern food-stall commodity creates significant local economic opportunities while reinforcing Bali’s gastronomic identity on a global scale.

Table 4. External Factor Analysis Summary (EFAS)

External Strategic Factors	Category	Weight	Rating	Score	Explanation Based on Qualitative Data
1. Digitalization & social media	Opportunity	0.15	4	0.60	Visual aesthetic capital of bright red blood attracts Gen Z audiences and food vloggers.
2. Extreme Culinary Tourism Trend	Opportunity	0.15	4	0.60	High demand among international

					tourists for “extreme experiences” and exotic culinary offerings.
3. Gen Z Cultural Interest	Opportunity	0.10	3	0.30	Growing interest among the younger generation in authentic cultural narratives behind commodities.
4. Financial Commodification	Opportunity	0.15	4	0.60	Transformation from a ritual menu into a modern food-stall commodity drives local economic growth.
1. Zoonotic Outbreak (<i>S. suis</i>)	Threat	0.15	1	0.15	Meningitis cases trigger negative global sentiment, risking Bali’s culinary tourism reputation.
2. Global Standardization (CHSE)	Threat	0.10	2	0.20	International tourism hygiene requirements conflict directly with traditional preparation techniques.
3. Culinary Homogenization	Threat	0.10	2	0.20	Market pressure to adjust flavors to mainstream preferences may obscure original rural recipes.
4. Government Regulation	Threat	0.10	1	0.10	Potential prohibition or strict supervision of raw blood products by public health authorities.
TOTAL EFAS		1.00		2.75	

Source: Primary Data, 2026

Nevertheless, tangible threats are present. Global tourism

standards such as CHSE (Cleanliness, Health, Safety, and Environment) frequently conflict with traditional preparation techniques. Zoonotic outbreaks, including meningitis cases reported in various regions, pose reputational risks to the tourism sector. Additionally, culinary homogenization pressures vendors to adjust flavors to mainstream preferences, potentially eroding the authenticity of rural recipes.

4.2 Strategy Formulation through the SWOT Matrix

To bridge the gap between strong cultural identity and strict medical safety demands, a SWOT matrix (Table 5) was constructed. This matrix maps how internal strengths may be leveraged to capture external opportunities and how internal weaknesses may be mitigated against environmental threats.

Table 5. SWOT Matrix of *Lawar Plek* Resilience

Internal / External	STRENGTHS	WEAKNESSES
	1. Strong philosophical values and cultural identity. 2. Unique taste character (<i>Nyamluh</i>). 3. Authenticity anchor (raw blood). 4. Use of <i>Base Genep</i> (fresh spice mixture).	1. High risk of <i>S. suis</i> bacterial contamination. 2. Absence of a heating process. 3. Cross-contamination (hand contact). 4. Desacralization of meaning in modern food stalls.
OPPORTUNITIES	SO Strategy (Aggressive)	WO Strategy (Turn-around)
1. Social media virality (Instagram/TikTok). 2. Trend of extreme/exotic culinary tourism. 3. Gen Z interest in authentic narratives. 4. Digital economic commodification.	1. Utilize the visual aesthetic of bright red blood as branding content under “The Ultimate Bali Experience” to attract special-interest tourism segments. 2. Emphasize the philosophical narrative of “blood as energy” to enhance its value beyond ordinary food.	1. Develop hygienic processing protocols in modern food stalls without eliminating raw blood (e.g., use of medical-grade gloves to remain “authentic” yet hygienic). 2. Digitalize cleanliness narratives to build trust among consumers outside Bali.
THREATS	ST Strategy (Diversification)	WT Strategy (Defensive)
1. Zoonotic outbreaks and meningitis. 2. Global tourism CHSE standards. 3. Flavor homogenization (quality decline). 4. Strict health authority supervision.	1. Educate consumers regarding the use of high-quality local pigs to differentiate the product from industrial pork risks. 2. Conduct periodic independent laboratory testing and display food safety certifications in modern food stalls.	1. Implement structural hygiene barriers, cold-chain tracing, and community-led sanitary certifications to ensure food safety while preserving raw blood authenticity. 2. Collaborate with medical anthropologists to design culturally sensitive health campaigns focused on improving external sanitation rather than product prohibition.

Source: Primary Data, 2026

Four primary strategic pillars emerge:

a. SO Strategy (Strengths–Opportunities): Aesthetic-Based Aggressiveness

This strategy capitalizes on the visual aesthetic of vibrant red blood as branding content under the narrative “The Ultimate Bali Experience.” *Lawar Plek* possesses strong “Instagrammable” qualities suitable for digital platforms such as TikTok and Instagram. By emphasizing the philosophical narrative of “blood as energy,” vendors can attract niche tourism segments seeking social validation through extreme culinary experiences.

b. ST Strategy (Strengths–Threats): Philosophy as a Shield Against Risk

In responding to zoonotic threats and regulatory scrutiny, this strategy mobilizes philosophical meaning and local wisdom. Vendors highlight the use of high-quality local pigs and *Base Genep* spices as natural neutralizers. Periodic independent laboratory testing and the display of food safety certifications further differentiate traditional risk from industrial mass-production risks, thereby sustaining consumer loyalty.

c. WO Strategy (Weaknesses–Opportunities):

Digitalization of Sanitation and Infrastructure

Hygiene-related weaknesses can be addressed through tourism-driven digital opportunities. This turn-around strategy requires improvements in stall infrastructure. Although raw blood remains central, protocols such as medical-grade glove usage and visually clean environments reduce perceived risk among tourists. The digital communication of cleanliness practices is essential for building trust among non-local consumers accustomed to international sanitation standards.

d. WT Strategy (Weaknesses–Threats): Technological Innovation for Existential Defense

Systemic Protections Without Product Modification As a defensive strategy, the risk posed by *Streptococcus suis* is considered an existential threat that could potentially lead to product prohibition. Because the findings of this study establish that raw blood serves as an immutable “authenticity anchor,” proposing processing innovations that alter the blood's structure (such as low-temperature pasteurization) is culturally unviable and violently contradicts the resilience of the tradition. Therefore, a rational middle-ground solution focuses entirely on external systemic safeguards. This includes implementing structural hygiene barriers during preparation to prevent cross-contamination, establishing strict cold-chain tracing for trusted local pork suppliers, and developing

community-led sanitary certifications overseen by customary authorities. Collaboration with medical anthropologists remains crucial to design culturally sensitive health campaigns that improve the structural safety of the preparation ecosystem without imposing prohibitive measures that threaten culinary identity.

5. Resilience Strategy: Negotiating Tradition within Modernity

The resilience of *Lawar Plek* amid modernization pressures and public health regulations is dynamically driven by the adaptive capacity of vendors. This reflects a tactical combination of the WO (turn-around) and WT (defensive) strategies derived from the SWOT matrix, wherein critical internal hygiene weaknesses are minimized to capture massive tourism market opportunities.

Based on the IFAS matrix analysis, the weakness associated with food safety risks from *S. suis* contamination (weight 0.15, rating 1) and processing hygiene (weight 0.10, rating 1) represent primary vulnerabilities that require immediate attention. Focus group discussions (FGD) indicate that to capture the high financial commodification opportunities highlighted in the EFAS matrix (weight 0.15, rating 4), vendors are deploying adaptive capacities by strictly tracing and sourcing meat and blood directly from certified slaughterhouses (RPH). This systematic approach effectively mitigates upstream biological contamination risks without altering the core recipe that mandates the use of raw blood.



Figure 6. Photograph of the *ngelawar* process using gloves (Primary Data: 2026)

Technically, this resilience is visualized through the adoption of new hygiene standards within the *ngelawar* process. While manual mixing is strictly preserved to maintain the dish's culinary “soul” and texture, vendors consciously address the cross-contamination weakness of direct hand contact (IFAS score 0.10) by implementing a

"surface hygiene" strategy. Vendors increasingly employ clean running water, separate cutting boards for meat and vegetables, and disposable gloves during serving. This operational shift functions as a symbolic shield and satisfies external tourism hygiene demands. These practices align with findings that hygiene standards heavily dictate culinary destination reputations (Berybe et al., 2023) and deeply shape tourists' positive emotional responses and long-term loyalty toward ethnic foods (Vidhu & Sumesh, 2025; Zhang et al., 2022).

Resilience is further reinforced through the ST (diversification) strategy, backed by a highly loyal local consumer base. During pig disease outbreaks which represent the highest external threat in the EFAS matrix with a weight of 0.15 and a rating of 1 local solidarity acts as an economic counterweight. This cultural defense is driven by the social capital of Sensory Distinctiveness (*Nyamluh*), which holds the highest strength score in the IFAS matrix (score 0.80), and Philosophical Tradition (score 0.60). The irreplaceable taste and texture profile of raw blood motivates the local community to sustain consumption as an act of cultural and economic solidarity. By maintaining transparency regarding ingredient sourcing (certified local suppliers) and educating the public on healthy pig-rearing practices, vendors preserve customer trust despite negative media coverage.

Through compelling cultural storytelling, vendors implement the aggressive SO strategy by transforming "medical risk" into a high-value "cultural asset." This strategy seamlessly capitalizes on extreme culinary tourism trends and social media digitalization opportunities, both of which scored highly in the EFAS matrix (each holding a score of 0.60). Digital platforms are leveraged to maintain the virality of *Lawar Plek* among millennials and Generation Z by framing it as an exotic, extreme, yet structurally secure culinary experience.

Table 6. Resilience Strategy and Structural Adaptation Matrix of *Lawar Plek*

External Pressure	Priority Factors (IFAS/EFAS)	Adaptation Strategy (Derived from SWOT)	Indicators of Success
Health Regulations & CHSE Standards	Hygiene Weakness (Weight: 0.10)	WO & WT Strategy: Implementation of structural hygiene barriers in stalls, use of PPE (medical gloves), and visual sanitation of the preparation environment.	Issuance of health compliance certificates; reduction of the "unsanitary" culinary stigma.
	CHSE Threat (Weight: 0.10)		
Disease	<i>S. suis</i>	ST & WT Strategy:	Customer trust

Issues & Zoonotic Outbreaks	Weakness (Weight: 0.15)	Enforcing rigid cold-chain tracing from certified local suppliers and maintaining absolute transparency of raw materials.	remains intact and unswayed despite shifting outbreak news and negative media.
	Outbreak Threat (Weight: 0.15)		
Competition & Hygienic Lifestyle Trends	Authenticity Strength (Weight: 0.15) Regulatory Threat (Weight: 0.10)	WT Strategy: Visual serving modifications via separating raw blood into sterile, temperature-controlled containers before table-side mixing.	Consumers receive instant psychological reassurance of food safety without disrupting the original taste profile.
Global Tourism Standards	Philosophy Strength (Weight: 0.15) Extreme Tourism Opportunity (Weight: 0.15)	SO Strategy: Enhancing cultural heritage storytelling regarding the sacred meaning of raw blood as a symbol of life vitality.	Global acceptance of <i>Lawar Plek</i> as a legitimate, authentic, and experience-based culinary asset.

Source: Primary Data, 2026

The resilience and structural adaptation matrix (Table 6) empirically demonstrates that external pressures and internal vulnerabilities are not resolved by modifying the product itself, but are strategically mitigated through the high-scoring pathways of the WO, ST, and SO combinations.

In conclusion, the resilience of *Lawar Plek* reflects an intelligent negotiation between the preservation of tradition and the structures of modernity. Because raw blood serves as an absolute "authenticity anchor" (IFAS score 0.60) that cannot be thermally processed or pasteurized without destroying its identity, "external systemic hygiene" and "community-led sanitary certifications" emerge as the vital mediating nodes for sustainability. By incorporating visual serving innovations such as separating blood into sterile, temperature-regulated containers and protecting the supply chain, vendors successfully carve out a "middle space". This space allows modern safety standards and ancestral sacred practices to coexist. Ultimately, this phenomenon proves that extreme culinary traditions achieve long-term resilience not by altering their sacred core, but by radically fortifying the protective operational ecosystem around them.

CONCLUSION

Based on the results of the analysis and discussion, this study draws several principal conclusions:

- The Dominance of Cultural Identity over Biological Risk

Lawar Plek is not merely a culinary product but a symbol of courage and vitality central to traditional Balinese cosmology. This study identifies a paradox wherein philosophical validity (blood as a symbol of life) and local trust in *base genep* as a natural neutralizer are deemed more credible by the community than medical warnings regarding *Streptococcus suis* bacterial risks. This finding demonstrates that consumption behavior within Balinese society prioritizes cultural identity resilience over strict compliance with biological safety standards.

b. Authenticity as a Digital Commodity

A significant shift in the meaning of *Lawar Plek* has occurred through social media-driven commodification processes. The dish has transformed from a sacred ritual artifact into a digital visual asset and an “extreme experience” for tourists, particularly Generation Z. Within the contemporary tourism ecosystem, raw blood functions as an “authenticity anchor” that is commercialized for market appeal. Tourists seek narrative validation through visual content to confirm their participation in what is perceived as the most original form of tradition, even when it involves the consumption of a biologically risky product.

c. Resilience through Strategic Negotiation

The endurance of *Lawar Plek* in the modern era results from an intelligent negotiation between tradition and modernity. Vendors implement “surface-level hygiene” strategies such as wearing gloves, sourcing raw materials from certified slaughterhouses, and maintaining visually clean presentation settings as a compromise to comply with tourism health standards (CHSE) without altering the substance of the traditional recipe. This resilience strategy enables *Lawar Plek* to persist as both cultural heritage and a competitive economic product, demonstrating that tradition can endure by selectively adopting elements of modernity to safeguard its core identity.

1. Theoretical Contributions

This study expands the existing boundaries of Commodification Theory within culinary tourism by shifting the analytical focus from cultural degradation to tactical adaptation. While traditional commodification frameworks often argue that commercialization inevitably dilutes, distorts, or trivializes cultural heritage, this study introduces the alternative concept of “Defensive

Commodification.” This new framework demonstrates that local practitioners actively utilize modern commercial tools, such as digital social media, alongside selective modern operational adaptations like surface-level hygiene, not to dilute their culture, but as a strategic shield to protect and sustain the most extreme and vulnerable elements of their identity. Ultimately, this proves that under intense regulatory and modern pressures, commodification can act as a powerful instrument of cultural resilience and preservation rather than cultural destruction.

2. Managerial and Policy Implications

The findings provide critical insights for the Bali Tourism Board and Regional Health Offices regarding the management of zoonotic food-borne outbreaks without triggering intense local cultural resistance. To achieve sustainable outcomes, policymakers must strictly avoid prohibitive actions, as attempting to ban raw blood or enforcing intrusive, product-altering interventions like thermal pasteurization will be perceived as an existential cultural threat, which inevitably fails by driving the practice underground into unsafe, clandestine consumption channels. Rather than trying to modify the traditional product itself, health authorities should shift their regulatory focus entirely toward external systemic safeguards by enforcing strict cold-chain tracing from local, trusted pig farms and mandating that raw materials are sourced exclusively from certified slaughterhouses.

The most effective path forward requires direct collaboration with medical anthropologists and customary councils (*Desa Adat*) to design community-led sanitary certifications. By framing structural hygiene improvements as a collective duty to honor and protect the sacred tradition rather than a top-down medical mandate, authorities can successfully ensure public food safety while maintaining public trust and preserving Bali's unique gastronomic heritage.

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DECLARATIONS

The authors declare that there is no conflict of interest regarding the publication of this article.

ETHICAL APPROVAL

This study was approved by the Ethics Committee of IPB Internasional. The research was conducted in accordance with ethical standards to ensure confidentiality, privacy, and voluntary participation. All participants provided their informed consent prior to their involvement in the study.

INFORMED CONSENT

All participants in this study provided informed consent prior to their involvement. They were fully informed about the purpose, procedures, potential risks, and benefits of the research, and their participation was voluntary.

DATA AVAILABILITY

The data used in this study are available upon request from the corresponding author. Access to the data may be subject to ethical or legal restrictions. The data supporting the findings of this study are available from the corresponding author, I Gusti Ayu Eka Suwintari (suwintari@ipb-intl.ac.id), upon reasonable request.

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